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Determine a set of subchannels, k(n), for the multichannel FEQ to use in conjunction with subchannel n, for each subchannel n used to transmit data, wherein the set of subchannels includes:

- i. the  $n^{th}$  subchannel and one or more of the following:
- ii. the nth subchannel's neighboring subchannels;
- iii. subchannels where RFI is located; and
- iv. subchannels where the noise power is (relatively) strong.

Solve for the multichannel FEQ coefficients for the  $n^{th}$  subchannel, g(n), according to:

$$\mathbf{G}(n,:) = \arg\min_{\mathbf{G}(n,:)} E \left\| X(n,t) - \mathbf{G}(n,:) \mathbf{Y}(:,t) \right\|^{2}$$

using all of the data at once, according to:

$$\mathbf{g}(n) = \mathbf{Y}(n)^{-1}\mathbf{x}(n),$$

or adaptively using a block of data at a time, according to:

$$\mathbf{g}(n) = \mathbf{g}(n) + \mu(t)e(t)\mathbf{Y}(\mathbf{k}(n),t)^{\bullet}$$
, where

$$e(t) = X(n,t) - \mathbf{Y}(\mathbf{k}(n),t)^T \mathbf{g}(n)$$
 , and where

 $\mu(t)$  controls the adaptation.

Figure 3